PUBLIC PROPOSAL FORM

FOR PUBLIC PROPOSALS ON THE INTERNATIONAL CODES
2003/2004 CODE DEVELOPMENT CYCLE

PLEASE SEE REVERSE FOR INSTRUCTIONS ON SUBMITTING PUBLIC PROPOSALS. PROPOSALS MUST COMPLY WITH THESE INSTRUCTIONS.

CLOSING DATE: All Proposals Must Be Received by March 24, 2003.

1) **Indicate the format in which you would like to receive your Public Proposals Monograph (PPM), Report of the Hearing (ROH) and Final Action Agenda (FAA):**

[x] Paper [ ] * CD [ ] *Download from ICC Website

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2) **PLEASE TYPE OR PRINT CLEARLY: FORMS WILL BE RETURNED if they contain unreadable information.**

Name:	Ronald Majette			Date:	March 24, 2003
Jurisdiction/Company:	U.S. Department of Energy				
Submitted on Behalf of:	U.S. Department of Energy				
Address:	1000 Independence Avenue, EE-2J, 1J-018				
City:	Washington	State:	DC	Zip +4:	20585
Phone:	202-586-7935	Ext:		Fax:	202-486-4617
e-mail:	Ronald.Majette@hq.doe.gov				

3) ***Signature:** _____ [X] **Signature on File**

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4) **Cost Impact:** **Indicate if this Proposal:** [ ] **will** [X] **will not** **increase the cost of construction.**

5) Indicate appropriate International Code(s) associated with this Public Proposal – Please use Acronym: (See back of this form or the instructions for list of names and acronyms for the International Codes): **IRC**

6) **Revision to:** [x] **Section** **Various, Chap 11.** [ ] **Table** _____ [ ] **Figure** _____

7) **PROPOSAL** **Please check appropriate box:**

[ ] **Revise as follows:** [ ] **Add new text as follows** [X] **Delete and substitute as follows:** [ ] **Delete without Substitution(s):**

Show the proposed NEW, REVISED or DELETED TEXT in legislative format: ~~Line through text to be deleted.~~ Underline text to be added.

Section R202
Delete **"RESIDENTIAL BUILDING TYPE"** without substitution**.**

Section R202
Revise the SUNROOM ADDITION definition.
SUNROOM ~~ADDITION~~ . A one-story structure ~~added~~ attached to a~~n existing~~ dwelling with a glazing area in excess of 40 percent of the gross area of the structure's exterior walls and roof.

Section R202
Delete "THERMAL ISOLATION" and substitute:
THERMAL ISOLATION. Physical and space conditioning separation from conditioned space(s). The conditioned space(s) shall be controlled as separate zones for heating and cooling or conditioned by separate equipment.

Section 318.1
Revise exception 3.
3. In counties identified ~~with footnote a in Table N11011.2~~ as in climate zones 1 through 5 in Table N1101.2

R408.2

Delete all exceptions and add a new Section immediately following.
Unvented crawl space. Ventilation openings in under-floor spaces specified in Sections R408.1 and R408.2 shall not be required where:

1) Exposed earth is covered with a continuous vapor retarder. All joints of the vapor retarder shall overlap by 6 inches (153 mm) and shall be sealed or taped. The edges of the vapor retarder shall extend at least 6 inches (153 mm) up the stem wall and shall be attached to the stem wall,
2) And one of the following is provided for the under-floor space:

a. Continuously operated mechanical exhaust ventilation at a rate equal to 1 cfm for each 20 ft^2 of crawlspace floor area, or
b. Conditioned air supply sized to deliver at a rate equal to 1 cfm for each 20 ft^2 of under-floor area, including a return pathway (such as a duct or transfer grille to the common area), and perimeter walls insulated in accordance with Section N1102.2.8, or
c. Plenum complying with M1601.4, if under floor spaces used as a plenum.

R806.4
Add new Section after R806.4
Conditioned attic assemblies: Unvented conditioned attic assemblies (spaces between the ceiling joists of the top story and the roof rafters) are permitted under the following conditions:

1. No interior vapor retarders are installed on the ceiling side (attic floor) of the unvented attic assembly.

2. An air-impermeable insulation is applied in direct contact to the underside/interior of the structural roof deck. "Air-impermeable" shall be defined by ASTM E 283.

3. In the warm humid locations as defined in N1101.2.1:
   a. For asphalt roofing shingles: A 1 perm or less vapor retarder (determined using Procedure B of ASTM E 96) is placed to the exterior of the structural roof deck; i.e. just above the roof structural sheathing.
   b. For wood shingles and shakes: a minimum continuous 1/4-inch air space separates the shingles/shakes and the roofing felt placed over the structural sheathing.

4. In zones 3 through 8 as defined in N1101.2 sufficient insulation is installed to maintain the monthly average temperature of the condensing surface above 45°F. The condensing surface is defined as either the structural roof deck or the interior surface of an air-impermeable insulation applied in direct contact to the underside/interior of the structural roof deck. "Air-impermeable" is quantitatively defined by ASTM E 283.For calculation purposes, an interior temperature of 68°F is assumed. The exterior temperature is assumed to be the monthly average outside temperature.

R808.1
Revise.
Recessed lighting fixtures installed in the building thermal envelope shall meet the requirements of Section ~~N1101.3~~ N1102.4.3.

Delete Chapter 11 and substitute:

CHAPTER 11
Energy Efficiency

SECTION N1101
GENERAL

N1101.1 Scope. This chapter regulates the energy efficiency for the design and construction of buildings regulated by this code.

Exception: Portions of the building envelope that do not enclose conditioned space.

N1101.2 Compliance. Compliance shall be demonstrated by either meeting the requirement of the *International Energy Conservation Code* or meeting the requirements of this chapter. Climate zones from Table N1101.2 shall be used in determining the applicable requirements from this chapter.

N1101.2.1 Warm humid counties. Warm humid counties are listed in Table N1101.2.1.

N1101.3 Identification. Materials, systems and equipment shall be identified in a manner that will allow a determination of compliance with the applicable provisions of this chapter.

N1101.4 Building thermal envelope insulation. An R-value identification mark shall be applied by the manufacturer to each piece of building thermal envelope insulation 12 inches (305 mm) or greater in width. Alternately, the insulation installers shall provide a certification listing the type, manufacturer and R-value of insulation installed in each element of the building thermal envelope. For blown or sprayed insulation, the initial installed thickness, settled thickness, settled R-value, installed density, coverage area and number of bags installed shall be listed on the certification. The insulation installer shall sign, date and post the certification in a conspicuous location on the job site.

N1101.4.1 Blown or sprayed roof/ceiling insulation. The thickness of blown in or sprayed roof/ceiling insulation shall be written in inches on markers that are installed at least one for every 300 ft^2 (28 m^2) throughout the attic space. The markers shall be affixed to the trusses or joists and marked with the minimum initial installed thickness with numbers a minimum of 1 inch (25 mm) in height. Each marker shall face the attic access opening.

N1101.4.2 Insulation mark installation. Insulating materials shall be installed such that the manufacturer's R-value mark is readily observable upon inspection.

Table N1101.5.
Default Glazed Fenestration U-Factors

Frame Type	Single Pane	Double Pane	Skylight	
			Single	Double
Metal	1.20	0.80	1.60	1.05
Non-Metal or metal clad	0.95	0.55	1.25	0.80
Glazed Block	0.60			

N1101.5 Fenestration product rating. U-factors of fenestration products (windows, doors and skylights) shall be determined in accordance with NFRC 100 by an accredited, independent laboratory, and labeled and certified by the manufacturer. Products lacking such a labeled U-factor shall be assigned a default U-factor from Table N1101.5. The solar heat gain coefficient (SHGC) of glazed fenestration products (windows, glazed doors and skylights) shall be determined in accordance with NFRC 200 by an accredited, independent laboratory, and labeled and certified by the manufacturer. Products lacking such a labeled SHGC shall be assigned a default SHGC of 0.75 for single pane and 0.65 for double pane and glazed block.

N1101.6 Installation. All materials, systems and equipment shall be installed in accordance with the manufacturer's installation instructions and the conditions of any listing or required certifications.

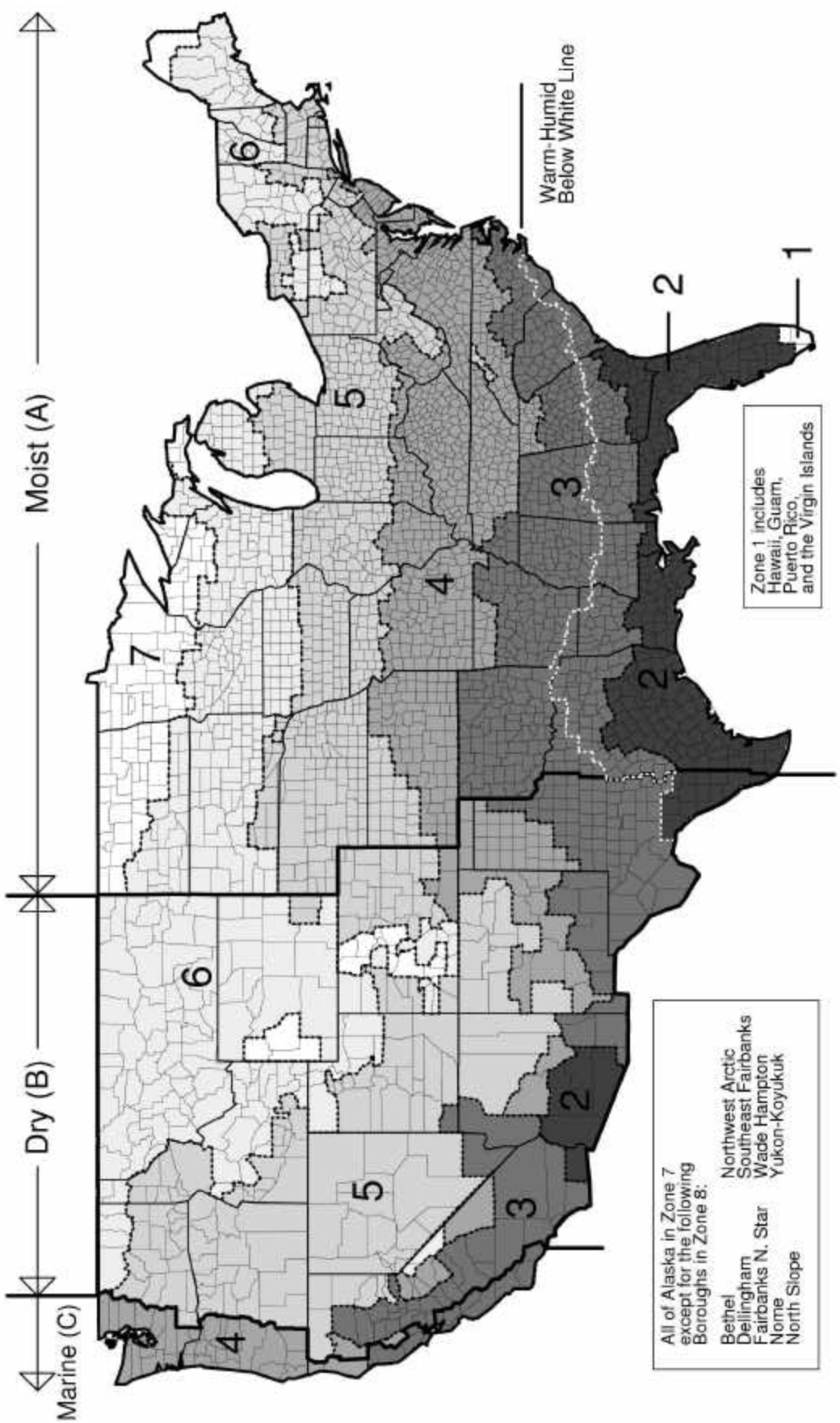

Figure N1101.2. Climate Zones

Table N1101.2 CLIMATE ZONES BY STATE AND COUNTY

Alabama
Zone 3 except
Zone 2
Baldwin
Mobile

Alaska
Zone 7 except
Zone 8
Bethel
Dellingham
Fairbanks North Star
Nome
North Slope
Northwest Arctic
Southeast Fairbanks
Wade Hampton
Yukon-Koyukuk

Arizona
Zone 3 except
Zone 2
La Paz
Maricopa
Pima
Pinal
Yuma
Zone 4
Gila
Yavapai
Zone 5
Apache
Coconino
Navajo

Arkansas
Zone 3 except
Zone 4
Baxter
Benton
Boone
Carroll
Fulton
Izard
Madison
Marion
Newton
Searcy
Stone
Washington

California
Zone 3 Dry except
Zone 2
Imperial
Zone 3 Marine
Alameda
Marin
Mendocino
Monterey
Napa
San Benito
San Francisco
San Luis Obispo
San Mateo
Santa Barbara
Santa Clara
Santa Cruz
Sonoma
Ventura
Zone 4 Dry
Amador
Calaveras
El Dorado
Inyo
Lake
Mariposa
Trinity
Tuolumne
Zone 4 Marine
Del Norte
Humboldt
Zone 5
Lassen
Modoc
Nevada
Plumas
Sierra
Siskiyou
Zone 6
Alpine
Mono

Colorado
Zone 5 except
Zone 4
Baca
Las Animas
Otero
Zone 6
Alamosa
Archuleta
Chaffee
Conejos
Costilla
Custer
Dolores
Eagle
Moffat
Ouray
Rio Blanco
Saguache
San Miguel
Zone 7
Clear
Creek
Grand
Gunnison
Hinsdale
Jackson
Lake
Mineral
Park
Pitkin
Rio Grande
Routt
San Juan
Summit

Connecticut
Zone 5

Delaware
Zone 4

Dist Of Columbia
Zone 4

Florida
Zone 2 except
Zone 1
Broward
Dade
Monroe

Georgia
Zone 3 except
Zone 2
Appling
Atkinson
Bacon
Baker
Berrien
Brantley
Brooks
Bryan
Camden
Charlton
Chatham
Clinch
Colquitt
Cook
Decatur
Echols
Effingham
Evans
Glynn
Grady
Jeff Davis
Lanier
Liberty
Long
Lowndes
McIntosh
Miller
Mitchell
Pierce
Seminole
Tattnall
Thomas
Toombs
Ware
Wayne
Zone 4
Banks
Catoosa
Chattooga
Dade
Dawson
Fannin
Floyd
Franklin
Gilmer
Gordon
Habersham
Hall
Lumpkin
Murray
Pickens
Rabun
Stephens
Towns
Union
Walker
White
Whitfield

Hawaii
Zone 1

Idaho
Zone 6 except
Zone 5
Ada
Benewah
Canyon
Cassia
Clearwater
Elmore
Gem
Gooding
Idaho
Jerome
Kootenai
Latah
Lewis
Lincoln
Minidoka
Nez Perce
Owyhee
Payette
Power
Shoshone
Twin Falls
Washington

Illinois
Zone 5 except
Zone 4
Alexander
Bond
Christian
Clay
Clinton
Crawford
Edwards
Effingham
Fayette
Franklin
Gallatin
Hamilton
Hardin
Jackson
Jasper
Jefferson
Johnson
Lawrence
Macoupin
Madison
Marion
Massac
Monroe
Montgomery
Perry
Pope
Pulaski
Randolph
Richland
Saline
Shelby
St Clair
Union
Wabash
Washington
Wayne
White
Williamson

Indiana
Zone 5 except
Zone 4
Brown
Clark
Crawford
Daviess
Dearborn
Dubois
Floyd
Gibson
Greene
Harrison
Jackson
Jefferson
Jennings
Knox
Lawrence
Martin
Monroe
Ohio
Orange
Perry
Pike
Posey
Ripley
Scott
Spencer
Sullivan
Switzerland
Vanderburgh
Warrick
Washington

Iowa
Zone 5 except
Zone 6
Allamakee
Black Hawk
Bremer
Buchanan
Buena Vista
Butler
Calhoun
Cerro Gordo
Cherokee
Chickasaw
Clay
Clayton
Delaware
Dickinson
Emmet
Fayette
Floyd
Franklin
Grundy
Hamilton
Hancock
Hardin
Howard
Humboldt
Ida
Kossuth
Lyon
Mitchell
O'Brien
Osceola
Palo Alto
Plymouth
Pocahontas
Sac
Sioux
Webster
Winnebago
Winneshiek
Worth
Wright

Kansas
Zone 4 except
Zone 5
Cheyenne
Cloud
Decatur
Ellis
Gove
Graham
Greeley

Hamilton
Jewell
Lane
Logan
Mitchell
Ness
Norton
Osborne
Phillips
Rawlins
Republic
Rooks
Scott
Sheridan
Sherman
Smith
Thomas
Trego
Wallace
Wichita

Kentucky

Zone 4

Louisiana

Zone 2 except
Zone 3
Bienville
Bossier
Caddo
Caldwell
Catahoula
Claiborne
Concordia
De Soto
East Carroll
Franklin
Grant
Jackson
La Salle
Lincoln
Madison
Morehouse
Natchitoches
Ouachita
Red River
Richland
Sabine
Tensas
Union
Vernon
Webster
West Carroll
Winn

Maine

Zone 6 except
Zone 7
Aroostook

Maryland

Zone 4 except
Zone 5 Garrett

Massachusetts

Zone 5

Michigan

Zone 5 except
Zone 6
Alcona
Alger
Alpena
Antrim
Arenac
Benzie
Charlevoix
Cheboygan
Clare
Crawford
Delta
Dickinson
Emmet
Gladwin
Grand Traverse
Huron
Iosco
Isabella
Kalkaska
Lake
Leelanau
Manistee
Marquette
Mason
Mecosta
Menominee
Missaukee
Montmorency
Newaygo
Oceana
Ogemaw
Oscoda
Otsego
Presque Isle
Roscommon
Sanilac
Wexford
Zone 7
Baraga
Chippewa
Gogebic
Houghton
Iron
Keweenaw
Luce
Mackinac
Ontonagon
Schoolcraft

Minnesota

Zone 6 except
Zone 7
Aitkin
Becker
Beltrami
Carlton
Cass
Clay
Clearwater
Cook
Crow Wing
Grant
Hubbard
Itasca
Kanabec
Kittson
Koochiching
Lake Of The Woods
Mahnomen
Marshall
Mille Lacs
Norman
Otter Tail
Pennington
Pine
Polk
Red Lake
Roseau
St Louis
Wadena
Wilkin

Mississippi

Zone 3 except
Zone 2
Hancock
Harrison
Jackson
Pearl River
Stone

Missouri

Zone 4 except
Zone 5
Adair
Andrew
Atchison
Buchanan
Caldwell
Chariton
Clark
Clinton
Daviess
De Kalb
Gentry
Grundy
Harrison
Holt
Knox
Lewis
Linn
Livingston
Macon
Marion
Mercer
Nodaway
Pike
Putnam
Ralls
Schuyler
Scotland
Shelby
Sullivan
Worth

Montana

Zone 6

Nebraska

Zone 5

Nevada

Zone 5 except
Zone 3
Clark

New Hampshire

Zone 6 except
Zone 5
Cheshire
Hillsborough
Rockingham
Strafford

New Jersey

Zone 4 except
Zone 5
Bergen
Hunterdon
Mercer
Morris
Passaic
Somerset
Sussex
Warren

New Mexico

Zone 4 except
Zone 3
Chaves
Dona Ana
Eddy
Hidalgo
Lea
Luna
Otero
Zone 5
Catron
Cibola
Colfax
Harding
Los Alamos
McKinley
Mora
Rio Arriba
San Juan
San Miguel
Sandoval
Santa Fe
Taos
Torrance

New York

Zone 5 except
Zone 4
Bronx
Kings
Nassau
New York
Queens
Richmond
Suffolk
Westchester
Zone 6
Allegany
Broome
Cattaraugus
Chenango
Clinton
Delaware
Essex
Franklin
Fulton
Hamilton
Herkimer
Jefferson
Lewis
Madison
Montgomery
Oneida
Otsego
Schoharie
Schuyler
St Lawrence
Steuben
Sullivan
Tompkins
Ulster
Warren
Wyoming

North Carolina

Zone 3 except
Zone 4
Alamance
Alexander
Bertie
Buncombe
Burke
Caldwell
Caswell
Catawba
Chatham
Cherokee
Clay
Cleveland
Davie
Durham
Forsyth
Franklin
Gates
Graham
Granville
Guilford
Halifax
Harnett
Haywood
Henderson
Hertford
Iredell
Jackson
Lee
Lincoln
Macon
Madison
McDowell
Nash
Northampton
Orange
Person
Polk
Rockingham
Rutherford
Stokes
Surry
Swain
Transylvania
Vance
Wake
Warren
Wilkes
Yadkin
Zone 5
Alleghany
Ashe
Avery
Mitchell
Watauga
Yancey

North Dakota

Zone 7 except
Zone 6
Adams
Billings
Bowman
Burleigh
Dickey
Dunn
Emmons
Golden Valley
Grant
Hettinger
La Moure
Logan
McIntosh
McKenzie
Mercer
Morton
Oliver
Ransom
Richland
Sargent
Sioux
Slope
Stark

Ohio

Zone 5 except
Zone 4
Adams
Brown
Clermont
Gallia
Hamilton
Lawrence

Pike
Scioto
Washington

Oklahoma

Zone 3 Moist except
Zone 4 Dry
Beaver
Cimarron
Texas

Oregon

Zone 4 Marine except
Zone 5 Dry
Baker
Crook
Deschutes
Gilliam
Grant
Harney
Hood River
Jefferson
Klamath
Lake
Malheur
Morrow
Sherman
Umatilla
Union
Wallowa
Wasco
Wheeler

Pennsylvania

Zone 5 except
Zone 4
Bucks
Chester
Delaware
Montgomery
Philadelphia
York
Zone 6
Cameron
Clearfield
Elk
McKean
Potter
Susquehanna
Tioga
Wayne

Rhode Island

Zone 5

South Carolina

Zone 3

South Dakota

Zone 6 except
Zone 5
Bennett
Bon Homme
Charles Mix
Clay
Douglas
Gregory
Hutchinson
Jackson
Mellette
Todd
Tripp
Union
Yankton

Tennessee

Zone 4 except
Zone 3
Chester
Crockett
Dyer
Fayette
Hardeman
Hardin
Haywood
Henderson
Lake
Lauderdale
Madison
McNairy
Shelby
Tipton

Texas

Zone 2 Moist except
Zone 2 Dry
Bandera
Dimmit
Edwards
Kinney
La Salle
Maverick
Medina
Real
Uvalde
Val Verde
Webb
Zapata
Zavala
Zone 3 Dry
Andrews
Baylor
Borden
Brewster
Callahan
Childress
Coke
Coleman
Collingsworth
Concho
Cottle
Crane
Crockett
Crosby
Culberson
Dawson
Dickens
Ector
El Paso
Fisher
Foard
Gaines
Garza
Glasscock
Hall
Hardeman
Haskell
Hemphill
Howard
Hudspeth
Irion
Jeff Davis
Jones
Kent
Kerr
Kimble
King
Knox
Loving
Lubbock
Lynn
Martin
Mason
Mcculloch
Menard
Midland
Mitchell
Motley
Nolan
Pecos
Presidio
Reagan
Reeves
Runnels
Schleicher
Scurry
Shackelford
Sterling
Stonewall
Sutton
Taylor
Terrell
Terry
Throckmorton
Tom Green
Ward
Wheeler
Wilbarger
Winkler
Zone 3 Moist
Archer
Blanco
Bowie
Brown
Burnet
Camp
Cass
Clay
Collin
Comanche
Cooke
Dallas
Delta
Denton
Eastland
Ellis
Erath
Fannin
Franklin
Gillespie
Grayson
Gregg
Hamilton
Harrison
Henderson
Hood
Hopkins
Hunt
Jack
Johnson
Kaufman
Kendall
Lamar
Lampasas
Llano
Montague
Stephens
Wichita
Wise
Young
Marion
Mills
Morris
Nacogdoches
Navarro
Palo
Pinto
Panola
Parker
Rains
Red
River
Rockwall
Rusk
Sabine
San Augustine
San Saba
Shelby
Smith
Somervell
Tarrant
Titus
Upshur
Van Zandt
Wood
Zone 4
Armstrong
Bailey
Briscoe
Carson
Castro
Cochran
Dallam
Deaf Smith
Donley
Floyd
Gray
Hale
Hansford
Hartley
Hockley
Hutchinson
Lamb
Lipscomb
Moore
Ochiltree
Oldham
Parmer
Potter
Randall
Roberts
Sherman
Swisher
Yoakum

Utah

Zone 5 except
Zone 3
Washington
Zone 6
Box Elder
Cache
Carbon
Daggett
Duchesne
Morgan
Rich
Summit
Uintah
Wasatch

Vermont

Zone 6

Virginia

Zone 4

Washington

Zone 4 Marine except
Zone 5 Dry
Adams
Asotin
Benton
Chelan
Columbia
Douglas
Franklin
Garfield
Grant
Kittitas
Klickitat
Lincoln
San Juan
Skamania
Spokane
Walla Walla
Whitman
Yakima
Zone 6 Dry
Ferry
Okanogan
Pend
Oreille
Stevens

West Virginia

Zone 5 except
Zone 4
Berkeley
Boone
Braxton
Cabell
Calhoun
Clay
Gilmer
Jackson
Jefferson
Kanawha
Lincoln
Logan
Mason
McDowell
Mercer
Mingo
Monroe
Morgan
Pleasants
Putnam
Ritchie
Roane
Tyler
Wayne
Wirt
Wood
Wyoming

Wisconsin

Zone 6 except
Zone 7
Ashland
Bayfield
Burnett
Douglas
Florence
Forest
Iron
Langlade
Lincoln
Oneida
Price
Sawyer
Taylor
Vilas
Washburn

Wyoming

Zone 6 except
Zone 5
Goshen
Platte
Zone 7
Lincoln
Sublette
Teto

Table N1101.2.1 Warm Humid Counties.

Alabama
Autauga
Baldwin
Barbour
Bullock
Butler
Choctaw
Clarke
Coffee
Conecuh
Covington
Crenshaw
Dale
Dallas
Elmore
Escambia
Geneva
Henry
Houston
Lowndes
Macon
Marengo
Mobile
Monroe
Montgomery
Perry
Pike
Russell
Washington
Wilcox

Arkansas
Columbia
Hempstead
Lafayette
Little River
Miller
Sevier
Union

Florida
All

Georgia
All in Zone 2
Plus
Ben Hill
Bleckley
Bulloch
Calhoun
Candler
Chattahoochee
Clay
Coffee
Crisp
Dodge
Dooly
Dougherty
Early
Emanuel
Houston
Irwin
Jenkins
Johnson
Laurens
Lee
Macon
Marion
Montgomery
Peach
Pulaski
Quitman
Randolph
Schley
Screven
Stewart
Sumter
Taylor
Telfair
Terrell
Tift
Treutlen
Turner
Twiggs
Webster
Wheeler
Wilcox
Worth

Louisiana
All in Zone 2
Plus
Bienville
Bossier
Caddo
Caldwell
Catahoula
Claiborne
Concordia
De Soto
Franklin
Grant
Jackson
La Salle
Lincoln
Madison
Natchitoches
Ouachita
Red River
Richland
Sabine
Tensas
Union
Vernon
Webster
Winn

Mississippi
All in Zone 2
Plus
Adams
Amite
Claiborne
Copiah
Covington
Forrest
Franklin
George
Greene
Hinds
Jefferson
Jefferson Davis
Jones
Lamar
Lawrence
Lincoln
Marion
Perry
Pike
Rankin
Simpson
Smith
Walthall
Warren
Wayne
Wilkinson

North Carolina
Brunswick
Carteret
Columbus
New Hanover
Onslow
Pender

South Carolina
Allendale
Bamberg
Barnwell
Beaufort
Berkeley
Charleston
Colleton
Dorchester
Georgetown
Hampton
Horry
Jasper

Texas
All in Zone 2
Plus
Blanco
Bowie
Brown
Burnet
Camp
Cass
Collin
Comanche
Dallas
Delta
Denton
Ellis
Erath
Franklin
Gillespie
Gregg
Hamilton
Harrison
Henderson
Hood
Hopkins
Hunt
Johnson
Kaufman
Kendall
Lamar
Lampasas
Llano
Marion
Mills
Morris
Nacogdoches
Navarro
Palo
Pinto
Panola
Parker
Rains
Red
River
Rockwall
Rusk
Sabine
San Augustine
San Saba
Shelby
Smith
Somervell
Tarrant
Titus
Upshur
Van Zandt
Wood

N1101.6.1 Protection of exposed foundation insulation. Insulation applied to the exterior of foundation walls and the perimeter of slab-on-grade floors shall have a rigid, opaque and weather-resistant protective covering to prevent the degradation of the insulation's thermal performance. The protective covering shall cover the exposed exterior insulation and extend a minimum of 6 inches (153 mm) below grade. **N1101.7 Above code programs.** The building official or other authority having jurisdiction shall be permitted to deem a national, state or local energy efficiency program to exceed the energy efficiency required by this chapter. Buildings approved in writing by such an energy efficiency program shall be considered in compliance with this chapter.

N1101.8 Certificate. A permanent certificate shall be posted inside the building on the electrical distribution panel. The certificate shall be completed by the builder or registered design professional. The certificate shall list the predominant R-values of insulation installed in or on ceiling/roof, walls, foundation (slab, basement wall, crawlspace wall and/or floor) and ducts outside conditioned spaces; U-factors for fenestration; and, where requirements apply, the solar heat gain coefficient (SHGC) of fenestration. Where there is more than one value for each component, the certificate shall list the value covering the largest area. The certificate shall list the type and efficiency of heating, cooling and service water heating equipment.

SECTION N1102
BUILDING THERMAL ENVELOPE

N1102.1 Insulation and fenestration criteria. The building thermal envelope shall meet the requirements of Table N1102.1 based on the climate zone specified in Table N1102.1.

N1102.1.1 R-value computation. Insulation material used in layers, such as framing cavity insulation and insulating sheathing, shall be summed to compute the component R-value. The manufacturer's settled R-value shall be used for blown insulation. Computed R-values shall not include an R-value for other building materials or air films.

N1102.1.2 U-factor alternative. An assembly with a U-factor equal to or less than that specified in Table N1102.1.2 shall be permitted as an alternative to the R-value in Table N1102.1.

N1102.2Total UA alternative. If the total building thermal envelope UA (sum of U-factor times assembly area) is less than or equal to the total UA resulting from using the U-factors in Table N1102.1.2, the building shall be considered in compliance with Table N1102.1. The UA calculation shall be done using a method consistent with the ASHRAE Handbook of Fundamentals and shall include the thermal bridging effects of framing materials. The SHGC requirements shall be met in addition to UA compliance.

N1102.1.4 Prescriptive trade offs. The trade offs specified in Table N1102.1.4 shall be permitted as an alternative to Table N1102.1.

N1102.2 Specific insulation requirements.

N1102.2.1 Ceilings with attic spaces. When Section N1102.1 would require R-38 in the ceiling, R-30 shall be deemed to satisfy the requirement for R-38 wherever the full height of uncompressed R-30 insulation extends over the wall top plate at the eaves. Similarly R-38 shall be deemed to satisfy the requirement for R-49 wherever the full height of uncompressed R-38 insulation extends over the wall top plate at the eaves.

N1102.2.2 Ceilings without attic spaces. Where Section N1102.1 would require insulation levels above R-30 and the design of the roof/ceiling assembly does not allow sufficient space for the required insulation, the minimum required insulation for such roof/ceiling assemblies shall be R-30.

N1102.2.3 Mass walls. Mass walls for the purposes this chapter shall be considered walls of concrete block, concrete, insulated concrete form (ICF), masonry cavity, brick (other than brick veneer), earth (adobe, compressed earth block, rammed earth), and solid timber/logs. The provisions of Section N1102.1 for mass walls shall be applicable when at least 50% of the required insulation R-value is on the exterior of, or integral to, the wall. Walls that do not meet this criterion for insulation placement shall meet the wood frame wall insulation requirements of Section N1102.1.

N1102.2.4 Steel-frame ceilings, walls and floors. Steel-frame ceilings, walls and floors shall meet the insulation requirements of Table N1102.2.4 or shall meet the wall U-factor

requirements in Table N1102.1.2. The calculation of the U-factor for a steel-frame wall shall use a series-parallel path calculation method.

N1102.2.5 Floors. Floor insulation shall be installed to maintain permanent contact with the underside of the subfloor decking.

N1102.2.6 Basement walls. Walls associated with conditioned basements shall be insulated from the top of the basement wall down to 10 feet below grade or to the basement floor, whichever is less. Walls associated with unconditioned basements shall meet this requirement unless the floor overhead is insulated in accordance with Sections N1102.1 and N1102.2.5.

N1102.2.7 Slab-on-grade floors. Slab-on-grade floors with a floor surface less than 12 inches below grade shall be insulated in accordance with Table N1102.1. The insulation shall extend downward from the top of the slab on the outside or inside of the foundation wall. Insulation located below grade shall be extended the distance provided in Table N1102.1 by any combination of vertical insulation, insulation extending under the slab or insulation extending out from the building. Insulation extending away from the building shall be protected by pavement or by a minimum of 10 inches of soil. The top edge of the insulation installed between the exterior wall and the edge of the interior slab shall be permitted to be cut at a 45-degree angle away from the exterior wall. Slab-edge insulation is not required in jurisdictions designated by the code official as having a very heavy termite infestation.

N1102.2.8 Crawl space walls. As an alternative to insulating floors over crawl spaces, crawl space walls shall be permitted to be insulated when the crawl space is not vented to the outside. Crawl space wall insulation shall be permanently fastened to the wall and extend downward from the floor to the finished grade level and then vertically and/or horizontally for at least an additional 24 inches (610 mm). Exposed earth in unvented crawl space foundations shall be covered with a continuous vapor retarder. All joints of the vapor retarder shall overlap by 6 inches (153 mm) and be sealed or taped. The edges of the vapor retarder shall extend at least 6 inches (153 mm) up the stem wall and shall be attached to the stem wall.

N1102.2.9 Masonry veneer. Insulation shall not be required on the horizontal portion of the foundation that supports a masonry veneer.

N1102.2.10 Thermally isolated sunroom insulation. The minimum ceiling insulation R-values shall be R-19 in zones 1 through 4 and R-24 in zones 5 though 8. The minimum wall R-value shall be R-13 in all zones. New wall(s) separating the sunroom from conditioned space shall meet the building thermal envelope requirements.

N1102.3 Fenestration.

N1102.3.1 U-factor. An area-weighted average of fenestration products shall be permitted to satisfy the U-factor requirements.

N1102.3.2 Glazed fenestration SHGC. An area-weighted average of fenestration products more than 50% glazed shall be permitted to satisfy the SHGC requirements.

N1102.3.3 Glazed fenestration exemption. Up to 15 ft^2 of glazed fenestration per dwelling unit shall be permitted to be exempt from U-factor and SHGC requirements in Section N1102.1.

N1102.3.4 Opaque door exemption. One opaque door assembly is exempted from the U-factor requirement in Section N1102.1.

N1102.3.5 Thermally isolated sunroom U-factor. For zones 4 through 8 the maximum fenestration U-factor shall be 0.50 and the maximum skylight U-factor shall be 0.75. New windows and doors separating the sunroom from conditioned space shall meet the building thermal envelope requirements.

N1102.3.6 Replacement fenestration. Where some or all of an existing fenestration unit is replaced with a new fenestration product, including frame, sash, and glazing, the replacement fenestration unit shall meet the applicable requirements for U-factor and SHGC in Table N1102.1.

N1102.3.7 Impact resistant fenestration. Jurisdictions in zones 1 through 4 that require impact resistant fenestration that meets ASTM E-1886, ASTM E-1996, or other approved impact standard shall be exempt from the fenestration U-factor requirement. Fenestration so exempted shall be listed and labeled by the manufacturer as meeting the approved impact standard.

N1102.4 Air leakage.

N1102.4.1 Building thermal envelope. The building thermal envelope shall be durably sealed to limit infiltration. The sealing methods between dissimilar materials shall allow for differential expansion and contraction. The following shall be caulked, gasketed, weatherstripped or otherwise sealed with an air barrier material, suitable film or solid material.

1. All joints, seams and penetrations.
2. Site-built windows, doors and skylights.
3. Openings between window and door assemblies and their respective jambs and framing.
4. Utility penetrations.
5. Dropped ceilings or chases adjacent to the thermal envelope.
6. Knee walls.
7. Walls and ceilings separating the garage from conditioned spaces.
8. Behind tubs and showers on exterior walls.
9. Common walls between dwelling units.
10. Other sources of infiltration.

N1102.4.2 Fenestration air leakage. Windows, skylights and sliding-glass doors shall have an air infiltration rate of no more than 0.3 cfm/ft^2, and swinging doors no more than 0.5 cfm/ft2, when tested according to NFRC 400, 101/I.S.2, or 101/I.S.2/NAFS by an accredited, independent laboratory, and listed and labeled by the manufacturer.

Exemptions: Site-built windows, skylights and doors.

N1102.4.3 Recessed lighting. Recessed lighting fixtures installed in the building thermal envelope shall be sealed to limit air leakage between conditioned and unconditioned spaces by being:

1. IC-rated and labeled with enclosures that are sealed or gasketed to prevent air leakage to the ceiling cavity or unconditioned space; or
2. IC-rated and labeled as meeting ASTM E 283 when tested at 1.57 psi (75 Pa) pressure differential with no more than 2.0 cfm (0.944 L/s) of air movement from the conditioned space to the ceiling cavity; or
3. located inside an airtight sealed box with clearances of at least 0.5 inches (12.7 mm) from combustible material and 3 inches (76mm) from insulation.

N1102.5 Moisture control. The building design shall not create conditions of accelerated deterioration from moisture condensation. Frame walls, floors and ceilings not ventilated to allow moisture to escape shall be provided with an approved vapor retarder. The vapor retarder shall be installed on the warm-in-winter side of the thermal insulation.

Exceptions:

1. In construction where moisture or its freezing will not damage the materials.
2. Frame walls, floors and ceilings in jurisdictions in Zones 1 through 5. (Crawl space floor vapor retarders are not exempted.)
3. Where other approved means to avoid condensation are provided.

N1102.5.1 Maximum fenestration U-factor. The maximum fenestration U-factor permitted using trade offs from Section N1102.1.3 in zones 6 through 8 shall be 0.55.

SECTION N1103
SYSTEMS

N1103.1 Controls. At least one thermostat shall be provided for each separate heating and cooling system.

N1103.2 Ducts.

N1103.2.1 Insulation. Supply and return ducts shall be insulated to a minimum of R-8. Ducts in floor trusses shall be insulated to a minimum of R-6.

Exception: Ducts or portions thereof located completely inside the building thermal envelope or within the building thermal envelope and separated from the exterior of the building thermal envelope with at least R-8 insulation.

N1103.2.2 Sealing. All ducts, air handlers, filter boxes, and building cavities used as ducts shall be sealed. Joints and seams shall comply with M1601.3.1.

N1103.2.3 Building cavities. Building framing cavities shall not be used as supply ducts.

N1103.3 Mechanical system piping insulation. Mechanical system piping capable of carrying fluids above 105 F or below 55 F shall be insulated to a minimum of R-2.

N1103.4 Circulating hot water systems. All circulating service hot water piping shall be insulated to at least R-2. Circulating hot water systems shall include an automatic or readily accessible manual switch that can turn off the hot water circulating pump when the system is not in use.

N1103.5 Mechanical ventilation. Outdoor air intakes and exhausts shall have automatic or gravity dampers that close when the ventilation system is not operating.

N1103.6 Equipment sizing. Heating and cooling equipment shall be sized as specified in M1401.3.

Add new to Section M1303.1

5. Maintenance instructions. Required regular maintenance actions. Title or publication number for the operation and maintenance manual for that particular model and type of product.
6. Equipment efficiency. Equipment efficiency for heating, cooling and service water heating equipment with equipment efficiency regulated as an AFUE, HSPF, SEER or EF.
   Exception: Equipment assembled in the field.

Section AJ102.4.

Replacement windows. Regardless of the category of work, when an entire existing window, including frame, sash and glazed portion is replaced, the replacement window shall comply with the requirements of ~~Section 1102.4~~ Chapter 11.

Table N1102.1. Insulation and Fenestration Requirements by Component[a]

Climate Zone	Fenestration U-Factor	Skylight[b] U-Factor	Glazed Fenestration SHGC	Ceiling R-Value	Wood Frame Wall R-Value	Mass Wall R-Value	Floor R-Value	Basement[c] Wall R-Value	Slab[d] R-Value & Depth	Crawl Space[c] Wall R-Value
1	1.20	1.60	0.40	30	13	6	13	0	0	0
2	0.80	1.05	0.40	30	13	6	13	0	0	0
3	0.60	0.90	0.40[e]	30	13	6	19	0	0	5/13
4 except Marine	0.40	0.60	NR	38	13	8	19	10 / 13	10, 2 ft	10 / 13
5 and Marine 4	0.35	0.60	NR	38	19 or 13+5[g]	13	25[f]	10 / 13	10, 2 ft	10 / 13
6	0.35	0.60	NR	49	19 or 13+5[g]	15	30[f]	10 / 13	10, 4 ft	10 / 13
7 and 8	0.35	0.60	NR	49	21	21	30[f]	15 / 21	15, 4 ft	10 / 13

(a) R-values are minimums. U-factors and SHGC are maximums. R-19 shall be permitted to be compressed into a 2x6 cavity.
(b) The fenestration U-factor column excludes skylights. The SHGC column applies to all glazed fenestration.
(c) The first R-value applies to continuous insulation, the second to framing cavity insulation; either insulation meets the requirement.
(d) R-5 shall be added to the required slab edge R-values for heated slabs.
(e) There are no SHGC requirements in the Marine zone.
(f) Or insulation sufficient to fill the framing cavity, R-19 minimum.
(g) "13+5" means R-13 cavity insulation plus R-5 insulated sheathing. If structural sheathing covers 25% or less of the exterior, R-5 sheathing is not required where structural sheathing is used. If structural sheathing covers more than 25% of exterior, structural sheathing shall be supplemented with insulated sheathing of at least R-2.

Table N1102.1.2. Equivalent U-Factors[(a)]

Climate Zone	Fenestration U-Factor	Skylight U-Factor	Ceiling U-Factor	Frame Wall U-Factor	Mass Wall U-Factor	Floor U-Factor	Basement Wall U-Factor	Crawl Space Wall U-Factor
1	1.20	1.60	0.035	0.082	0.110	0.064	0.360	0.477
2	0.80	1.05	0.035	0.082	0.110	0.064	0.360	0.477
3	0.60	0.90	0.035	0.082	0.110	0.047	0.360	0.136
4 except Marine	0.40	0.60	0.030	0.082	0.099	0.047	0.059	0.065
5 and Marine 4	0.35	0.60	0.030	0.060	0.082	0.037	0.059	0.065
6	0.35	0.60	0.026	0.060	0.077	0.033	0.059	0.065
7 and 8	0.35	0.60	0.026	0.057	0.057	0.033	0.041	0.057

(a) Non-fenestration U-factors shall be obtained from measurement, calculation or an approved source.

Table N1102.2.4. Steel-Frame Ceiling, Wall and Floor Insulation (R-Value)

Wood Frame R-Value Requirement	Cold-Formed Steel Equivalent R –Value[1]
Steel Truss Ceilings[2]	
R-30	R-38 or R-30+3 or R-26+5
R-38	R-49 or R-38+3
R-49	R-38+5
Steel Joist Ceilings[2]	
R-30	R-38 in 2x4 or 2x6 or 2x8 R-49 in any framing
R-38	R-49 in 2x4 or 2x6 or 2x8 or 2x10
Steel Framed Wall	
R-13	R-13+5 or R-15+4 or R-21+3
R-19	R-13+9 or R-19+8 or R-25+7
R-21	R-13+10 or R-19+9 or R-25+8
Steel Joist Floor	
R-13	R-19 in 2x6 R-19+R6 in 2x8 or 2x10
R-19	R-19+R-6 in 2x6 R-19+R-12 in 2x8 or 2x10

Notes:
1. Cavity insulation R-value is listed first, followed by continuous insulation R-value.
2. Insulation exceeding the height of the framing shall cover the framing.

Table N1102.1.4. HVAC System Tradeoffs

Climate Zone(s)	Required Improvement for HVAC System	Allowed Alternatives for Insulation/Fenestration[1]
2	SEER 13 **OR** Ducts & HVAC in conditioned space **OR** Ground source heat pump	Any fenestration U-factor
3	SEER 13 with AFUE 90 **OR** SEER 13 with HSPF 7.9 **OR** Ducts & HVAC in conditioned space **OR** Ground source heat pump	Double pane window with any U-factor
4 or 5	SEER 12 with AFUE 92 **OR** SEER 12 with HSPF 8.2 **OR** Ducts & HVAC in conditioned space **OR** Ground source heat pump	R-0 unconditioned basement R-0 slab R-19 floor
5	SEER 12 with AFUE 92 **OR** SEER 12 with HSPF 8.2 **OR** Ducts & HVAC in conditioned space **OR** Ground source heat pump	R-13 wall R-19 floor
6	SEER 12 with AFUE 92 **OR** SEER 12 with HSPF 8.2 **OR** Ducts & HVAC in conditioned space **OR** Ground source heat pump	R-38 ceiling R-13 wall
7	AFUE 92 **OR** HSPF 8.2 **OR** Ducts & HVAC in conditioned space **OR** Ground source heat pump	R-38 ceiling R-15 wall

Notes:

1. Table N1102.1 requirements not stated remain the same. All footnotes of Table N1102.1 apply.
2. After the year 2006 the SEER shall be increased by 2 from the value in this table; HSPF shall increase from 7.9 to 8.5 and from 8.2 to 8.8.
3. In zones 3 through 8 dwelling units with electric resistance heating are not eligible to use this table.
4. "Ducts & HVAC in conditioned space" includes air-handler and furnace being in conditioned space. Factory-sealed air handlers tested, listed and labeled by the manufacturer as having a 2% or less leakage rate at 1.0 inch water gauge shall meet the requirement for air handler being in conditioned space.
5. For the uninsulated unconditioned basements trade off in Zones 4 and 5, at most one foot of the basement wall can be above grade. Any combination of the foundation insulation specified shall be permitted.
6. Slabs with uninsulated hot water pipes, uninsulated air distribution ducts or electric heating cables installed within or under the slab are not eligible for this tradeoff of slab-edge insulation.
7. Evaporative cooling shall meet the SEER requirement if code official has deemed evaporative cooling appropriate to the climate of the jurisdiction.
8. Marine zone residences without mechanical air conditioning shall be exempt from the SEER requirement in this table.

8) SUPPORTING INFORMATION (State purpose and reason, and provide substantiation to support proposed change):

The purpose of this proposal to the International Residential Code [IRC]) and to the International Energy Conservation Code is to further the usability of the energy codes. The U.S. Department of Energy has for the past decade worked to promote the energy codes in numerous ways—assisting states and localities in adopting and implementing IECC/IRC-based codes, developing and deploying user-friendly code compliance tools, hosting workshops and training sessions, operating an energy codes hotline, assembling and distributing information via a dedicated web site and email list, and proposing helpful changes to the IECC through the ICC code development process. Directly parallel and usually identical changes are being proposed for the IECC.

As DOE has promoted the adoption and use of the IRC/IECC, builders and code officials have repeatedly echoed one consistent comment—that the residential portion of the IECC/IRC is difficult to understand, complicated to adopt and implement, and expensive to enforce. This comment has been widespread in spite of the availability of very easy-to-use—and free—code compliance software. In evaluating the causes for these comments, DOE has identified a number of specific characteristics that make the energy portion of the IRC and residential IECC difficult to use, especially by jurisdictions with limited staff and budget. In no particular order, these include:

- Because IECC thermal criteria (insulation and windows requirements) are a function of heating degree-days (HDD), and any particular location may have multiple sources of HDD data or be equally distant from more than one source, there is sometimes ambiguity as to what the code requires. Further, the HDD framework makes it difficult to properly accommodate cooling concerns in the code. Finally, the HDD basis, which is used only in some of the IECC's compliance paths, differs from the county-defined zones used in some other compliance paths (including some commercial sections) of the IECC and in the IRC.
- Because envelope stringency is a function of glazing area as a percentage of wall area, the code behaves irrationally in some ways. For example, the code tends to permit a less efficient envelope for larger houses and for houses with inefficient aspect ratios or ceiling heights. In apparent contradiction, low-window-area homes (e.g., low-budget starter homes) can have wall and window requirements that are unreasonably inefficient.
- The IRC has energy requirements only for residences with glazing less than 15%, making it an incomplete energy code.
- The code's requirements are very non-uniform, especially in the IECC, making it difficult or impossible for builders and code officials (and homebuyers) to develop a sense of the code's baseline requirements in a jurisdiction. For example, the HDD-based requirements vary from location to location within a jurisdiction, and often result in unexpected differences between adjacent jurisdictions that are part of a larger community or metropolitan area. Further, because envelope efficiency requirements vary with building geometry, the code's requirements cannot be known until a design is finalized, which makes change orders after construction has begun difficult and expensive, sometimes resulting in noncompliance even when the new design would use less energy. Also, different building types generally have different requirements. Finally, the combination of HDD-based criteria and county-based zones results in apparent ambiguities and sometimes jurisdictional confusion between residential and commercial sections.
- The IECC code text is frequently cited as being difficult to read and understand due to its length and apparent lack of integration between compliance paths.

For all the reasons listed above, DOE finds that enforcement of the code is inconsistent at best, and very rare for some important building elements such as glazing area, which has a large influence on the required R-values and U-factors for a given house.

DOE has therefore developed a proposal that rewrites Chapter 11 of the IRC and residential sections of the IECC. The intent is to transform the code to a format that is easy to understand, easy for builders and inspectors to remember, relatively unchanging within jurisdictional boundaries, unambiguous, and inexpensive to adopt and enforce. The format we have chosen is exemplified by a single provision that was introduced to the IECC in 1998—the SHGC requirement for windows in southern locations. That code provision, in contrast to the bulk of the code, has been well understood, readily implemented, and has generated little if any confusion. DOE's current code change proposal follows that model in several ways, focusing on clear and unambiguous specifications even at the expense of some precision. (The SHGC requirement is a uniform 0.40 over a very large geographical area and never changes regardless of the building type, size, shape, orientation, or any other factor.)

This code change reformats the IRC's energy provisions without substantially affecting the overall stringency of the code. Note, however, that with any change in format, especially one that changes the geo-climatic basis for the requirements, some specific locations will experience modest stringency changes.

Another goal of this proposal is to produce efficiency prescriptions that are easily memorized by builders and code officials in any particular jurisdiction, as codes of this nature are observed to experience considerably higher compliance rates than codes for which each and every house has different requirements. Despite its historical length and complexity, the IECC actually has provisions for only a handful of residential energy efficiency measures—primarily the building envelope components and HVAC distribution systems. DOE's primary intent is to provide very simple, clear, and fair requirements for these measures.

Following the philosophy discussed above, DOE's change proposal has the following major characteristics:

- The climate basis of the proposed requirements has been changed from simple HDD to geographical zones that are based on multiple climate variables (so that both heating and cooling considerations are accommodated). Further, within the U.S., the zones are completely defined by political boundaries (county lines) so that code users will never have to choose from disparate climate data sources to determine local requirements. The proposed new climate zones were developed in an open process, in consultation with relevant standards committees of the American Society of Heating Refrigerating, and Air Conditioning Engineers (ASHRAE). The proposed zones are designed to be an appropriate foundation for both residential and commercial codes, and may be useful in other contexts as well. A thorough discussion of the zones' development can be found at http://www.energycodes.gov/implement/pdfs/climate_paper_review_draft_rev.pdf
- The proposed code changes prescriptive envelope requirements are not a function of window area. Eliminating this dependency has a number of beneficial effects on the code's usability and enforceability. DOE has analyzed the potential drawbacks of this approach and has concluded that the benefits outweigh them. This analysis is available for review at http://www.energycodes.gov/implement/pdfs/wwr_elimination.pdf
- The proposed code change is designed to accommodate local practices and preferences, eliminating common local hurdles to code compliance. For example, the proposal accommodates some coastal regions' need for glazing with high wind ratings and high-termite regions' need for easy compliance without slab-edge insulation.
- The proposed code change is designed to increase consumer awareness of a home's energy features, by making baseline requirements more uniform within a jurisdiction and by requiring a disclosure of each house's R-values, U-factors, and HVAC efficiencies.
- The proposed code change is designed, to the extent practicable, to incorporate aspects of the latest building science regarding energy efficiency and its effects on moisture control and durability. For example, the proposed code change contains provisions related to unvented crawlspaces, modifies vapor

retarder requirements, requires sealing of air handlers in garages, and limits worst-case glazing U-factors in locations where moisture condensation can be a serious problem.

- The proposed IECC code change greatly simplifies and streamlines the text, eliminates unused definitions, brings other definitions into agreement with those in other ICC codes, and eliminates many inadvertent loopholes that have resulted from unintended interactions between compliance paths.

In preparing this change proposal, DOE has worked for two years with numerous interested parties, including builders, code officials, manufacturers, efficiency advocates, energy simulation experts, and building scientists. DOE has worked openly, making successive drafts of the change proposal available for review via DOE's energy codes web site (http://www.energycodes.gov/). Over one hundred individuals and entities provided hundreds of helpful comments. DOE reviewed all comments carefully and tried to craft a proposal that fairly balances all viewpoints without compromising the overall goal of increased usability. Parts of the proposal were developed in consultation with experts from ASHRAE's 90.1 standard committee.

DOE believes this proposed change, if adopted, will result in a much easier to use code, easier and hence more widespread adoption of IRC / IECC-based state codes, easier and less expensive enforcement, and more consistent compliance even in jurisdictions with minimal enforcement infrastructure. We urge the ICC to consider this proposal on those merits.

PLEASE USE SEPARATE FORM FOR EACH PROPOSAL

SUBMITTAL AS A DOCUMENT ATTACHMED TO AN E-MAIL IS PREFERRED
(SEE REVERSE FOR DIRECTIONS ON WHERE TO SEND PROPOSALS)